

MILITARY SPECIFICATION SHEET

FILTERS RADIO FREQUENCY INTERFERENCE,
 STYLE FL42

PINs M15733/28-0003 and -0004 were made inactive for new design as of 13 August 1979. PINs M15733/28-0001 and -0002 were made inactive for new design as of 29 November 1982. For new design, see table II.

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the filters described herein shall consist of this specification and the latest issue of MIL-PRF-15733.

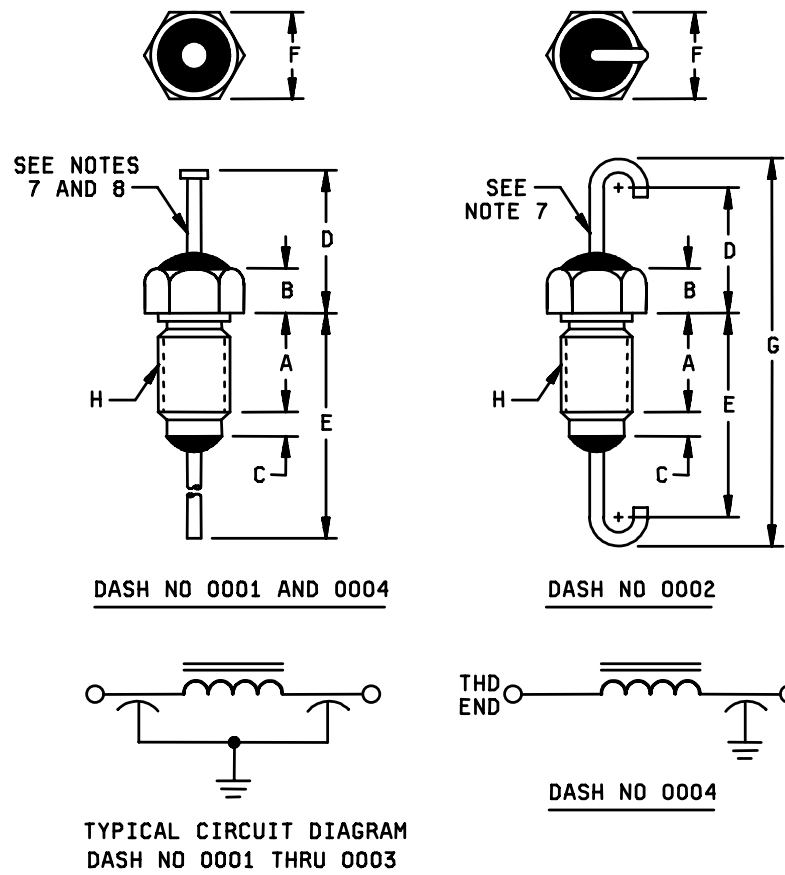
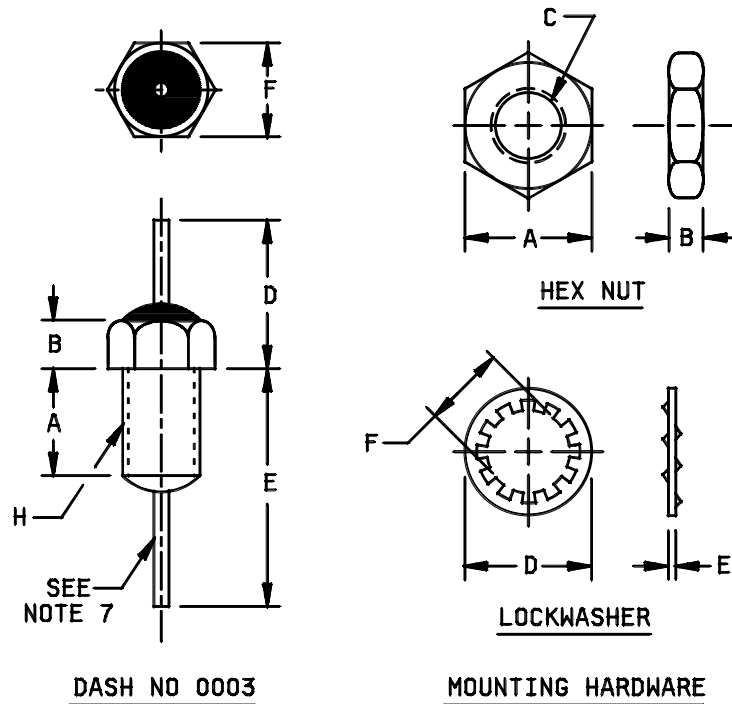


FIGURE 1. Case and hardware dimensions and circuit configuration.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. Mounting torque 3 inch-pounds maximum..
5. Case is ground terminal.
6. Mounting hardware (lockwasher and hex nut) will be supplied with filter.
7. Leads shall be solid, solder coated, AWG 20 (.032 dia.) for dash numbers 0001 and 0002, and AWG 22 (.025 dia.) for dash number 0003.
8. Leads shall be solid, copper, silver plated, AWG 18 (.040 dia.) for dash number 0004.
9. Terminal identification (non-symmetrical filters): For dash number 0004 the case shall be marked at the threaded end of the filter with the symbol "L".
10. Turret headed terminal shown for dash numbers 0001 and 0004 is optional.
11. For dash number 0003, an undercut or imperfect threads out to a maximum of .060 inch (1.52 mm) from the hex head or mounting surface is permissible.

FIGURE 1. Case and hardware dimensions and circuit configuration - Continued.

Filter dimensions and weights.

Dash no.	A		B		C		D		E		F		G		H	Weight Max (grams)
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Thread	
0001	.201 (5.11)	.231 (5.87)	.078 (1.98)	.108 (2.74)	.035 (.89)	.065 (1.65)	.281 (7.14)	.343 (8.71)	.859 (21.82)	.921 (23.39)	.172 (4.37)	.202 (5.13)	N/A	N/A	.164-32 UNC-2A	2.0
0002	.201 (5.11)	.231 (5.87)	.078 (1.98)	.108 (2.74)	.035 (.89)	.065 (1.65)	.281 (7.14)	.343 (8.71)	.435 (11.05)	.515 (13.08)	.172 (4.37)	.202 (5.13)	.875 (22.23)	.937 (23.80)	.164-32 UNC-2A	2.0
0003	.201 (5.11)	.231 (5.87)	.130 (3.30)	.170 (4.32)	N/A	N/A	.310 (7.87)	N/A	.490 (12.45)	N/A	.173 (4.39)	.203 (5.16)	N/A	N/A	.164-32 UNC-2A	1.5
0004	.201 (5.11)	.231 (5.87)	.078 (1.98)	.108 (2.74)	.050 REF. (1.27)		.281 (7.14)	.343 (8.71)	.859 (21.82)	.921 (23.39)	.172 (4.37)	.202 (5.13)	N/A	N/A	.164-32 UNC-2A	2.2

Hardware dimensions.

Dash no.	Hex nut					Lockwasher					
	A		B		C	D		E		F	
	Min	Max	Min	Max	Thread	Min	Max	Min	Max	Min	Max
0001 thru 0004	.235 (5.97)	.265 (6.73)	.073 (1.85)	.078 (1.98)	.164-32 UNC-2B	.278 (7.06)	.288 (7.32)	.016 (.41)	.020 (.51)	.162 (4.11)	.172 (4.37)

FIGURE 1. Case and hardware dimensions and circuit configuration - Continued.

MIL-F-15733/28F

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: See figure I.

Case: Metal.

Case and hardware finish: In accordance with MIL-PRF-15733. Pure tin finish is prohibited.

Terminals: Solderable.

Operating temperature range: -55° to +125°C.

Rated voltage: 100 V dc or 70 V rms, to 400 Hz over the rated temperature range of -55°C to +125°C for dash numbers 0001, 0002, and 0004 and 50 V dc for dash number 0003.

Rated current: 10 amperes, dc or ac (rms) for dash numbers 0001, 0002, and 0004, and 25 amperes, dc and IF current (no insertion loss change), 20 amperes (no overheating), 0.3 amperes RF current for dash number 0003.

Insertion loss: In accordance with MIL-PRF-15733 and table I.

TABLE I. Insertion loss versus frequency.

Dash number	Minimum no load insertion loss (db) in accordance with MIL-STD-220 at +25°C						
	1 MHz	10 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1-10 GHz
0001	N/A	N/A	25	45	60	60	60
0002	N/A	N/A	25	45	60	60	60
0003	N/A	20	50	65	75	N/A	85
0004	10	28	N/A	41	44	N/A	60

Seal: Not applicable.

Capacitance to ground: In accordance with MIL-PRF-15733.

Measured capacitance shall be at least 1,500 pF for dash numbers 0001 and 0002; 15,000 pF for dash number 0003; and 22,000 pF for dash number 0004.

Temperature rise: 25°C, maximum.

Dielectric withstanding voltage: In accordance with MIL-PRF-15733. The following details and exceptions shall apply: The test voltage shall be 600 V dc for dash numbers 0001 and 0002, 150 V dc for dash number 0003 and 200 V dc for dash number 0004, applied for 1 to 5 seconds.

Barometric pressure (reduced): In accordance with MIL-PRF-15733 and Method 105, MIL-STD-202; test condition D for dash numbers 0001 and 0002, test condition B for dash numbers 0003 and 0004.

Insulation resistance: In accordance with MIL-PRF-15733. The insulation resistance measured at +25°C between either terminal and the case shall be at least 10,000 megohms for dash numbers 0001, 0002, and 0004, and 5,000 megohms for dash number 0003.

Voltage drop: Not applicable.

Terminal strength: In accordance with MIL-PRF-15733 and Method 211, MIL-STD-202; test condition A.

Applied force: 5 pounds for dash numbers 0001 and 0002, 2 pounds for dash numbers 0003 and 0004.

MIL-F-15733/28F

Salt atmosphere (corrosion): In accordance with MIL-PRF-15733 and Method 101, MIL-STD-202; test condition B.

Thermal shock and immersion: Not applicable.

Shock (specified pulse): In accordance with MIL-PRF-15733 and Method 213, MIL-STD-202; test condition I.

Vibration, high frequency: In accordance with MIL-PRF-15733 and Method 204, MIL-STD-202; test condition D.

Moisture resistance: Not applicable.

Life: In accordance with MIL-PRF-15733 and Method 108, MIL-STD-202; test condition D. The following exception shall apply:

Measurements after test:

Insulation resistance shall be not less than 1,000 megohms for dash numbers 0001, 0002, and 0004 and not less than 30 percent of initial requirements for dash number 0003.

Part or Identifying Number (PIN): M15733/28-(dash number from table I).

Marking: Filters shall be marked, as a minimum, with an abbreviated PIN, as shown on figure 2. Full marking, in accordance with MIL-PRF-15733, shall be marked on the unit package.

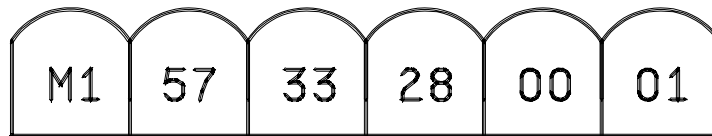


FIGURE 2. Example of marking for the abbreviated PIN on the hex flats - expanded view.

Application note: These nonhermetically sealed filters may be susceptible to moisture intrusion when subjected to repeated thermal cycling. If these items are to be utilized in applications enduring harsh environments, the user should consider placing them within hermetic enclosures.

Substitution data: See table II.

Table II. Substitution data.

Superseded Part or Identifying Number (PIN)	Superseding Part or Identifying Number (PIN)
M15733/28-0001	M15733/61-0008
M15733/28-0002	M15733/61-0008
M15733/28-0003	M15733/61-0014
M15733/28-0004	M15733/61-0013

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

MIL-F-15733/28F

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:

DLA - CC

(Project 5915-0412-09)

Review activities:

Army - AR, AT, AV, MI
Navy - AS, MC, OS
Air Force - 19, 99